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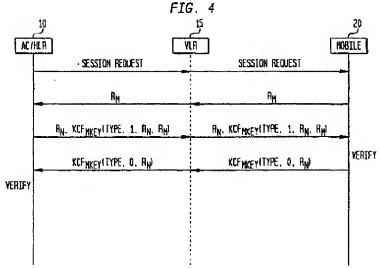
(54) **Method for updating secret shared data in a wireless communication system**

(57) In the method for updating secret shared data (SSD) in a wireless communication system, a first party outputs a first random number as a first challenge wherein the first party is one of a network and a mobile. A second party generates a second random number in response to the first challenge. The second party is the mobile if the first party is the network, and the second party is the network if the first party is the mobile. The second party generates a first challenge response by performing a keyed cryptographic function (KCF) on the first challenge and the second random number using a secondary key, which is not the SSD and is derived from a root key. The second party then transfers the second random number, as a second challenge, and the first challenge response to the first party. The first party verifies the second party based on the first and second challenges and the first challenge response, generates a second challenge response by performing the KCF on the second challenge using the secondary key, and transfers the second challenge response to the second party. The second party verifies the first party based on the second challenge and the second challenge response. Both parties respectively establish the SSD based on the first and second challenges.

FIG. 4



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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 5705

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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Y	* the whole document *	9,10,21, 22	
Y	PARK CH -S: "ON CERTIFICATE-BASED SECURITY PROTOCOLS FOR WIRELESS MOBILE COMMUNICATION SYSTEMS" , IEEE NETWORK: THE MAGAZINE OF COMPUTER COMMUNICATIONS,IEEE INC. NEW YORK,US, VOL. 11, NR. 5, PAGE(S) 50-55 XP000699941 ISSN: 0890-8044 * page 51, line 54 - page 54, line 45 *	9,10,21, 22	
A	US 5 613 214 A (KAMACHI KENICHIRO ET AL) 18 March 1997 (1997-03-18) * page 6, line 50 - line 67 * * page 8, line 53 - line 67 * * page 9 - page 10 * * figures 2,3 *	1,2,4-6, 9-11, 14-22	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H04Q H04L
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18 October 2000	Psatha, H

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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18-10-2000

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